"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARPENAK, A.E.; DOVZHIK, M.A.; POPKOVA, V.N.; VORONINA, L.M. (Moskva)

The efficacy of the N_5 nonspecific diet during reconvalescence from serious infectious diseases [with summary in English]. Vop.pit. 17 no.2:42-47 Mr-Ap '58. (MIRA 11:4)

1. Iz kafedry biokhimii (zav. - prof. A.E.Shapenak) Moskovskogo meditsinskogo stomatologicheskogo instituta i infektsionnogo otdeleniya (nauchnyy rukovoditel' prof. S.I.Ratner) Klinicheskoy bil'nitsy imeni S.P.Botkina.

(DIETS, therapeutic use
infect. dis., evaluation (Rus))
(COMMUNICABLE DISEASES,
infect. dis., ther., with nonspecific diet,
evaluation (Rus))

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARPENAK, A.E., SHISHOVA, O.A., GOROZHANKINA, L.A., ZHARKOV, M.V.

Effect of insufficient and excessive histidine content of food on certain metabolic processes and functions of the organism. [with summary in English]. Vop.pit. 17 no.4:30-35 Je-Ag'58 (MIRA 11:7)

1. Iz laboratorii biokhimii (zav. - prof. A.E. Sharpenak) i laboratorii vysshey nervnoy deyatel'nosti (zav. - prof. A.I. Makarychev) Instituta pitaniya AMN SSSR, Moskva.
(HISTIDINE, effects, dietary excess & insuff., on metab. & funct. of organism (Rus))

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARPENAK, A. E.

"The problem of high-quality bread."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists and Infectionists, 1959.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARPENAK, A.E.; MIKHEYEVA, L.I.; NIKOLAYEVA, N.V.; SLOVOKHOTNOVA, I.A.; BOBIK, G.S.; ALAYEVA, V.N.; STUPNIKOVA, G.A.; GUSAKOVA, I.A.; GUSARSKAYA, V.V.; VOLCHEK, K.Ye.; SMIRNOVA, V.N.; PANOVA, V.V.; KHERSONSKAYA, F.M.;

Connection between enamel, the dentine, and the organism as a whole. Vrach.delo no.2:203-205 F '59. (MIRA 12:6)

1. Kafedra biokhimii (zav. - prof.A.E.Sharpenak) Moskovskogo meditsinskogo stomatologicheskogo instituta.
(TEETH)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARPENAK, A.E., prof; SHISHOVA, O.A.; GOROZHANKINA, L.A.

Effect of ionizing radiations on animals fed food containing various levels of histidine. Med.rad. 4 no.6:37-41 Je '59. (MIRA 12:8)

1. Iz laboratorii biokhimii (zav. - prof.A.E.Sharpenak) Instituta pitaniya AMN SSSR.

(RADIATION, eff.
eff. of dietary histidine on reactivity (Rus))
(HISTIDINE, eff.
dietary histidine on reactivity to radiations in animals (Rus))

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARPENAK, A.E., prof.

Iraceelements in nutrition. Zdorov'e 5 no.4:12-13 Ap '59. (MIRA 12:4)

(MINERALS IN THE BODY)
(TRACE ELEMENTS)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARPENAK, A.E. (Moskva)

Human quantitative requirements of proteins and individual amino acids. Vop.pit. 18 no.1:73-83 Ja-F '59. (MIRA 12:2)
(PROTEINS, metab.
requirements, quantitative aspects (Rus))
(AMINO ACIDS, metab.
same)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARPENAK, A.E.; SHISHOVA, O.A.; GOROZHANKINA, L.A.

Effect of various histidine levels in food on certain metabolic and functional processes in the animal organism exposed to an unfaverable environment. Vop. pit. 18 no.3:31-35 My-Je '59. (MIRA 12:7)

1. Iz laboratorii biokhimii (zav. - prof. A.E. Sharpenak) Instituta pitaniya AMN SSSR, Moskva.
(HISTIDINE, effects,
on metab. & physiol. funct. in animals exposed to stress, dietary admin. (Rus))
(STRESS, eff.
on metab. & physiol. responses of animals to dietary histidine (Rus))

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARPENAK, A.E.; TITRYANTS, O.K.

Anesthetic action of B_1 vitamin (thiamine) paste on hard dental tissues. Stomatologiia 38 no.4:13-15 Jl-Ag '59. (MIRA 12:12)

1. Iz kafedry terpevticheskoy stomatologii (zav. - prof. Ye.Ye. Platonov) i kafedry biokhimii (zav. - prof. A.E. Sharpenak) Moskovskogo meditsinskogo stomatologicheskogo instituta (dir. - dotsent G.N. Beletskiy).
(THIAMINE) (THERAPEUTICS, DENTAL)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARPENAK, A.E.; BOBYLEVA, V.R.; GOROZHANKINA, L.A.; ALEKSANDROVA, Ye.V.

Method for inducing experimental dental caries in white rats. Stomatologiia 38 no.6:3-9 N-D '59. (MIRA 13:4)

1. Iz kafedry biokhimii (zaveduyushchiy - prof. A.E. Sharpenak) Moskovskogo meditsinskogo stomatologicheskogo instituta, laboratorii biokhimii (zav. - prof. A.E. Sharpenak) Instituta pitaniya AMN SSSR i kafedry propedevtiki khirurgicheskoy stomatologii (zav. - dotsent G.A. Vasil'yev Moskovskogo meditsinskogo stomatologicheskogo instituta (direktor - dotsent G.N. Beletskiy).
(TEETH--DISEASES)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARPENAK A.E. (USSR)

"Biochemical Aspects of Dental Caries."

Report presented at the 5th Int'l. Biochemical Congress, Moscow, 10-16 Aug 1961.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARPENAK, A.E.; BOBYLEVA, V.R.; GOROZHANKINA, L.A.; ALEKSANDROVA, Ye.V.

Method for producing experimental caries in cotton rats. Stomatologiia 40 no.1:12-17 Ja-F '61. (MIRA 14:5)

1. Iz kafedry biokhimii (zav. - prof. A.E.Sharpenak), kafedry propedevtiki khirurgicheskoy stomatologii (zav. - dotsent G.A. Vasil'yev) Moskovskogo meditsinskogo stomatologicheskogo instituta (dir. - dotsent G.N.Beletskiy) i laboratorii biokhimii Instituta pitaniya AMN SSSR.

(TEETH--DISEASES)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARPENAK, A.E.; BOBYLEVA, V.R.; GOROZHANKINA, L.A.; ALEKSANDROVA, Ye.V.

Role of the alimentary factor in the origin and prevention of dental caries. Stomatologiia 40 no.4:3-7 Jl-Ag '61. (MIRA 14:11)

1. Iz laboratorii biokhimii (zav. - prof. A.E.Sharpenak) Instituta pitaniya AMN SSSR, kafedra biokhimii (zav. - prof. A.E.Sharpenak) i kafedry propedevtiki khirurgicheskoy stomatologii (zav. - doktor meditsinskikh nauk G.A.Vasil'yev) Moskovskogo meditsinskogo stomatologicheskogo instituta (dir. - dotsent G.N.Zeletskiy).
(TEETH--DISEASES)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARPENAKH, Anatoliy Ernestovich; YERSHOV, V.V., red.; ALAVERDOV, Ya.G., red.izd-va; MURASHOVA, V.A., tekhn. red.

[Organic chemistry] Organicheskaia khimiia; dlia studentov meditsinskikh institutov. Moskva, Vysshaia shkola, 1963. 337 p. (MIRA 17:2)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARPENAK, A.E.; BOBYLEVA, V.R.; GOROZHANKINA, L.A.

Role of nervous excitation in the development of dental caries. Stomatologiia 42 no.3:7-10 My-Je '63 (MIRA 17:1)

1. Iz kafedry biokhimii (zav. - prof. A.E. Sharpenak) Moskvoskogo meditsinskogo stomatologicheskogo instituta.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARPENAK, A.E.; BOBYLEVA, V.R.; GOROZHANKINA, L.A.

Role of protein, lysine, some mineral substances, and vitamins A and D in the prevention of dental caries. Vop. pit. 22 no.2:39-44 Mr-Ap '63. (MIRA 17:2)

1. Iz kafedry biokhimii (zav. A.E. Sharpenak) Moskovskogo meditsinskogo stomatologicheskogo instituta.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARPENAK, Anatoliy Ernestovich; KOSENKO, Sergey Alekseyevich; GOL'DENBERG, G.S., red.

[Laboratory work in organic chemistry] Praktikum po organicheskoi khimii. Moskva, Vysshaia shkola, 1965. 170 p. (MIRA 18:4)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

VOROPAY, P.I.; ZHUKOV, G.V.; KAS'YANOV, V.M.; SHARPILO, I.G.

Air cooling in piston compressors by feeding water to an air flow. Mash. i neft. obor. no.7:30-33 '63. (MIRA 17:1)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti im. akademika Gubkina i Upravleniye "Krasnodarneft'".

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SHARPILO, L D

17 (4)

SOV/21-59-8-26/26

AUTHORS: Sharpylo, L. D., Sharpylo, V. P.

TITLE: A New Species of Trematode, Stephanoproraoides Markewitschi nov. sp., from the Muskrat

PERIODICAL: Dopovidi Akademii nauk Ukrains'koi RSR, 1959, Nr 8 pp 923 - 925 (USSR)

ABSTRACT: The article covers a detailed description of a new species of Trematode found by the authors in the small intestine of Ondatra zibethica L., caught in the Dnepr estuary in Ukraine (Kherson oblast') on June 30, 1952. The new Tremadote belongs to the genus Stephanoproraoides Price, 1934, (fam. Cotylotretidae Skrjabin et Baschkirova, 1956). It was named Stephanoproraoides markewitschi nov. sp. - in honor of A. P. Markevich, Member of AS UkrSSR. Comparing the S. markewitschi with S. lawi Price, 1934, which is the only species hitherto known, the authors differentiate them according to the following principal characters: 1) The correlation between the width and the length of the body; S. lawi - at the average of 1:14, S. markewitschi - 1:4. 2) Correlation between the

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A New Species of Trematode, Stephanoproraoides Markewitschi nov. sp., from the Muskrat

length of the pedicle and the length of the body; S. lawi at the average of 1:4, S. markewitschi - 1:5. 3) S. lawi possesses a well developed sucker which is larger than the pharynx. The S. markewitschi, on the contrary, has a poorly developed oral sucker and a large mufflike pharynx which, in regard to size, surpasses it by several times. 4) The S. lawi has a long ovary, the ovary of the S. markewitschi is short. The uterus of S. lawi is located a considerable distance from the lower edge of the pedicle, whereas the uterus of S. markewitschi borders upon it. Except these main characters, the two species differ from each other by a number of subordinate indications. All the comparisons and items mentioned above make it possible to describe the discovered Trematode as a new species. There is 1 drawing, and 3 references, 2 of which are Soviet and 1 American.

ASSOCIATION: Institut zoologii AN USSR (Institute of Zoology of the AS UkrSSR)

PRESENTED: By V. H. Kas'yanenko (V. G. Kas'yanenko), Member of the AS UkrSSR

SUBMITTED: April 13, 1959

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARPILO, L.D.

New species of helminths from rodents and insectivorous animals in the Ukraine. Trudy Ukr. resp. nauch. ob-va paraz. no. 3: 206-215 '64 (MIRA 19:1)

1. Institut zoologii AN UkrSSR.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

PIDOPLICHKO, I.G. [Pidoplichko, I.H.], otv. red.; VOINSTVENSKIY, M.A.[Voinstvens'kyi, M.A.], doktor biol. nauk zam. otv. red.; KISTYAKIVSKIY, O.B.[Kistiakivs'kyi, O.B.], doktor biol. nauk, red.; MAZHUGA, P.M.[Mazhuha, P.M.], doktor biol. nauk, red.; ABELENTSEV, V.G.[Abelientsev, V.H.], kand. biol. nauk, red.; SHARPILO, L.D., red.

[Terrestrial vertebrates of the Ukraine; ecology, distribution, history of the fauna] Nazemni khrebetni Ukrainy; ekologiia, pozhyrennia, istoriia fauny. Kyiv, Naukova dumka, 1965. 123 p. (MIRA 18:9)

1. Akademiya nauk URSR, Kiev. 2. Chlen-korrespondent Ukr.SSR (for Pidoplichko). 3. Institut zoologii AN Ukr.SSR (for Abelentsev, Voinstvenskiy).

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

POLTAVCHUK, Maksim Alekseyevich; PAVLOV, I.P., doktor biol. nauk otv. red.; SHARPILO, L.D., red.

[Biology and cultivation of Dnieper pike perch in closed bodies of water] Biologiia i razvedenie dneprovskogo sudaka v zamknutykh vodoemakh. Kiev, Naukova dumka, 1965. 256 p. (MIRA 18:9)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

VODYANITSKIY, V.A., otv. red.; DOLGOPOL'SKAYA, M.A., kand. biol. nauk. red.: GREZE, V.N., doktor biol. nauk, red.; IVLEV, V.S., doktor biol. nauk, red.[deceased]; PITSYK, G.K., kand. biol. nauk, red.; SHARPILO, L.D., red.

[Studies of plankton in the Black and Azov Seas] Issledovaniia planktona Chernogo i Azovskogo morei. Kiev, Naukova dumka, 1965. 115 p. (MIRA 18:8)

1. Akademiya nauk URSR, Kiev. 2. Chlen-korrespondent AN Ukr.SSR (for Vodyanitskiy).

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

VODYANITSKIY, V.A., otv. red.; DOLGOPOL'SKAYA, M.A., kand. biol. nauk, red.; VINOGRADOV, K.A., doktor biol. nauk, red.; GREZE, V.N., doktor biol. nauk, red.; IVLEV, V.S., doktor biol. nauk, red.[deceased]; KISELEVA, M.I., kand. biol. nauk, red.; SHARPILO, L.D., red.

[Benthos] Bentos. Kiev, Naukova dumka, 1965. 137 p. (MIRA 18:7)

1. Akademiya nauk SSSR. 2. Chlen-korrespondent AN Ukr.SSR (for Vodyanitskiy).

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

OS'KIN, Valentin Il'ich, polkovnik; SHARPILO, P.N., red.; MYASNIKOVA, T.F., tekhn. red.

[Disciplinary practice in the Soviet Armed Forces] Distsiplinarnaia praktika v Sovetskikh Vooruzhennykh Silakh. Moskva, Voen.izdvo M-va oborony SSSR, 1961. 78 p. (MIRA 14:12)
(Military discipline)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

ZELENTSOV, Andrey Andreyevich, polkovnik; SHARPILO, P.N., red.; KUZ'MIN, I.F., tekhn.red.

[Confidence in the soldier] Doverie k soldatu. Moskva, Voen. izd-vo M-va obor.SSSR, 1961. 79 p. (MIRA 14:12)
(Psychology, Military)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

TITOV, Nikolay Grigor'yevich, polkovnik; SHARPILO, P.N., polkovnik, red.; KUZ'MIN, I.F., tekhn. red.

[Achievement after achievement; notes of a commander on socialist competititon] Za rubezhom - rubezh; zametki komandira o sotsialisticheskom sorevnovanii. Moskva, Voen.izd-vo M-va oborony SSSR, 1961. 91 p. (MIRA 14:12)
(Tanks (Military science))

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

BARABANSHCHIKOV, Aleksandr Vasil'yevich, podpolkovnik, kand. pedag. nauk; SHARPILO, P.N., red.; MUKHANOVA, M.D., tekhn. red.

[Pedagogical basis for the training of members of the Soviet Armed Forces]Pedagogicheskie osnovy obucheniia sovetskikh voinov. Moskva, Voenizdat, 1962. 150 p. (MIRA 16:1)
(Russia—Armed forces) (Teaching)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

GODULYAN, Ivan Stepanovich [Hodulian, I.S.], kand. sel'khoz. nauk; SHARPILO, Pavel Stepanovich [Sharpylo, P.S.]; ZADONTSEV, A.I., zas. deyatel' nauki URSR, akademik; LIVENSKAYA, O.I.[Livens'ka, O.I.], red.; GLUSHKO, G.I.[Hlushko, H.I.], tekhn. red.

[Best preceding crops for corn] Kukurudzi - krashchykh popered-nykiv. Dnipropetrovs'k, Dnipropetrovs'ke knyzhkove vyd-vo, 1961. 22 p. (MIRA 15:7)

1. Direktor Vsesoyuznogo nauchno-issledovatel'skogo instituta kukuruzy i Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Zadontsev).
(Ukraine--Corn (Maize)) (Rotation of crops)

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SHARPILO, V.P.

Studying the helminth fauna of some reptiles of the Ukrainina S.S.R.
Trudy Gel'm. lab. 9:370-376 '59. (MIRA 13:3)
(UKRAINE--WORMS, INTESTINAL AND PARASITIC)
(PARASITES--REPTILES)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARPILO, V.P. [Sharpylo, V.P.]

Study of helminth parasites of vipers in the Ukrainian S.S.R. Pratsi Inst.zool.AN URSR 15:59-63 '59. (MIRA 13:7)
(Ukraine--Worms, Parasitic and intestinal)
(Parasites--Snakes)

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17 (4) SOV/21-59-8-26/26

AUTHORS: Sharpylo, L. D., Sharpylo, V. P.

TITLE: A New Species of Trematode, Stephanoproraoides Markewitschi nov. sp., from the Muskrat

PERIODICAL: Dopovidi Akademii nauk Ukrains'koi RSR, 1959, Nr 8 pp 923 - 925 (USSR)

ABSTRACT: The article covers a detailed description of a new species of Trematode found by the authors in the small intestine of Ondatra zibethica L., caught in the Dnepr estuary in Ukraine (Kherson oblast') on June 30, 1952. The new Tremadote belongs to the genus Stephanoproraoides Price, 1934, (fam. Cotylotretidae Skrjabin et Baschkirova, 1956). It was named Stephanoproraoides markewitschi nov. sp. - in honor of A. P. Markevich, Member of AS UkrSSR. Comparing the S. markewitschi with S. lawi Price, 1934, which is the only species hitherto known, the authors differentiate them according to the following principal characters: 1) The correlation between the width and the length of the body; S. lawi - at the average of 1:14, S. markewitschi - 1:4. 2) Correlation between the

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A New Species of Trematode, Stephanoproraoides Markewitschi nov. sp., from the Muskrat

length of the pedicle and the length of the body; S. lawi at the average of 1:4, S. markewitschi - 1:5. 3) S. lawi possesses a well developed sucker which is larger than the pharynx. The S. markewitschi, on the contrary, has a poorly developed oral sucker and a large mufflike pharynx which, in regard to size, surpasses it by several times. 4) The S. lawi has a long ovary, the ovary of the S. markewitschi is short. The uterus of S. lawi is located a considerable distance from the lower edge of the pedicle, whereas the uterus of S. markewitschi borders upon it. Except these main characters, the two species differ from each other by a number of subordinate indications. All the comparisons and items mentioned above make it possible to describe the discovered Trematode as a new species. There is 1 drawing, and 3 references, 2 of which are Soviet and 1 American.

Card 2/2

ASSOCIATION: Institut zoologii AN USSR (Institute of Zoology of the AS UkrSSR) (V. G. Kas'yanenko),
PRESENTED: By V. H. Kas'yanenko, Member of the AS UkrSSR
SUBMITTED: April 13, 1959

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARPILO, V.P. [Sharpylo, V.P.]

Studying helminths of sand lizard (Lacerta aglis L.) in the Ukraine. Pratsi Inst. zool. AN URSR 30:85-90 '61. (MIRA 16:8)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARPILO, V.P. [Sharpylo, V.P.]

Study of the helminths of reptiles in Transcaucasia. Zbir. prats' Zool.muz. AN URSR no.31:63-69 '62. (MIRA 17:2)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARPILO, V.P.

Larval forms of nematodes, the parasites of reptiles in the Ukrainian S.S.R. Trudy Ukr. resp. nauch. ob-va paraz. no. 3: 112-124 '64 (MIRA 19:1)

1. Institut zoologii AN UkrSSR.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARPIN, Semen Andreyevich; VITVITSKIY, M., red.; BURKATOVSKAYA, TS., tekhn. red.

[Tables for calculating the wages of workers and office employees for vacation time or compensation for unused leave; revised to take into consideration the change in the price scale and substitution of the new currency] Tablitsy dlia ischisleniia srednego zarabotka rabochikh i sluzhashchikh za vremia otpuska ili kompensatsii za neispol'zovannyi otpusk; pererabotany s uchetom izmeneniia masshtabe tsen i zamenoi obrashchaiushchikhsia deneg novymi den'gami. L'vov, knizhno-zhurnal'noe izd-vo, 1961. 142 p. (MIRA 14:9)

(Wages--Tables and ready reckoners)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARPISEK, J.

Problems of the efficient use of materials in the machinery industry. p. 161. (NOVA TECHNIKA, Vol. 2, No. 6, June 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 12, Dec 1957. Uncl.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

L 28847-66

ACC NR: AP6013817 (A) SOURCE CODE: UR/0356/65/000/012/0017/0019

AUTHOR: Sharshak, V. (Engineer)

ORG: None

16
B

TITLE: A screw digger for excavating irrigation canals

SOURCE: Tekhnika v sel'skom khozyaystve, no. 12, 1965, 17-19

TOPIC TAGS: excavating machinery, agricultural machinery

ABSTRACT: A screw type digger for cutting narrow irrigation trenches is described. Drawn by a caterpillar tractor it can break up the soil and dig a trench of a trapezoidal cross-section. The cone-shaped cutting screw consists of three spiral blades of different diameters carrying steel cutters. The screw blades are mounted on a vertical rotating shaft. An additional cutter is fixed to the lower end of the shaft. The cutting device is provided with a metal guide casing of a half-cone shape. Two side-guiding plates are welded to the casing for discharging the excavated soil. The cutting

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ACC NR: AP6013817

mechanism is suspended to a two-wheeled frame. The cutter cone is driven from the tractor by means of a propelling shaft and bevel gear. A power of 50 to 55 hp is needed for a 350-rpm rotation of the screw. The digging output is 50 to 60 cu m/hr. The weight of the digger is 300 kg. The excavated 0.5-m deep trench is 0.3 m wide at the bottom and 1.3 wide at the upper surface. The design of the digger and its drive are schematically represented in two figures. In addition, two photos show the digger in operation. Orig. art. has: 4 figures.

SUB CODE: 02,13 / SUBM DATE: None

Card 2/2 UDC

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

ACCESSION NR: AR4044012 S/0058/64/000/006/E087/E087

SOURCE: Ref. zh. Fizika, Abs. 6E664

AUTHOR: Postnikov, V. S.; Sharshakov, I. M.; Maslennikov, E. M.

TITLE: The question of grain-boundary stress relaxation in pure metals

CITED SOURCE: Sb. Relaksats. yavleniya v met. i splavakh. M., Metallurgizdat, 1963, 165-170

TOPIC TAGS: grain boundary stress relaxation, stress relaxation, metal, internal friction

TRANSLATION: On 23 pure metals taken in the annealed state there are investigated peaks on the curves of the temperature dependence of internal friction, connected with the viscous behavior of grain boundaries. For all investigated polycrystalline metals, on the curve of the temperature dependence of internal friction there is a peak caused by the existence of grain broundaries. The height of the peak depends on the amount and form of the impurities; very

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ACCESSION NR: AR4044012

pure metals should have a high internal-friction peak. Available data show that the height of the peak internal-friction peak. Available data show that the height of the peak in the case of Zn and Al depends significantly on the frequency of the oscillations. Furthermore, periodic heating of single-crystal Al and the macrocrystalline alloy of Al with 0.5% Cu causes the appearance of a peak on the internal-friction temperature curve. This peak appears in that temperature region where there is revealed the "grain-boundary" peak of internal friction of polycrystalline Al. The conclusion is drawn that the internal-friction peak on the curve of the temperature dependence of the internal friction of a pure polycrystal may be caused not only by viscous slip along the grain boundary but also by some other mechanism.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

L 9963-65 EWT(m)/T/EWP(t) WW/JD/WB

ACCESSION NR: AT4046870 S/0000/64/000/000/0367/0375

AUTHOR: Postnikov, V. S., Gorshkov, G. A., Zolotukhin, I. V., Sharshakov, I. M., Usanov, V. V.

TITLE: Effect of different kinds of treatment on some properties of SN-2 and SN-3 steel

SOURCE: AN SSSR, Nauchny*y sovet po probleme zharoprochny*kh splavov. Issledovaniya staley i splavov (Studies on steels and alloys). Moscow, Izd-vo Nauka, 1964, 367-375

TOPIC TAGS: steel structure, steel crystallization, normalizing, steel strength, steel internal friction, steel cold working, stainless steel

ABSTRACT: High-strength stainless steels of the transient austenitic-martensitic class are widely used. Since they are between the austenitic and martensitic grades their properties may be changed with ease. In the present article, the effects of normalizing, cold working and aging on SN-2 and SN-3 steels are considered. The chemical composition of the steel supplied by a plant in Voronezh was studied

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L 9963-65
ACCESSION NR: AT4046870

limiting strength on the MP-0.5 machine, and the microstructure under an MIM-8m microscope. The data are tabulated and shown in Figs. 1-3 of the Enclosure. The lowest strength and microhardness were obtained after normalizing; the highest after additional treatment by cold working and aging. All aged samples, no matter what treatment was used, had a lower strength at higher temperatures. At 450C, the strength drops sharply, while internal friction changes in the opposite way. The hardening of steel after normalizing with further cold working leads to a decrease in internal friction caused by disintegration of martensite and formation of a carbide with an increase in strength at room temperatures. Microscopic study of SN-2 steel shows that the $\alpha \rightarrow \gamma$ transformation begins near 480C and ends near 750C, causing a rise in internal friction. The occurrence of this increase is not completely explained, however, since the peak on the curve for SN-2 steel depends to some extent on the normalizing temperature. Orig. art. has: 7 figures and 2 tables.

ASSOCIATION: None

SUBMITTED: 16Jun64 [illegible] [illegible] MM

[illegible] [illegible]

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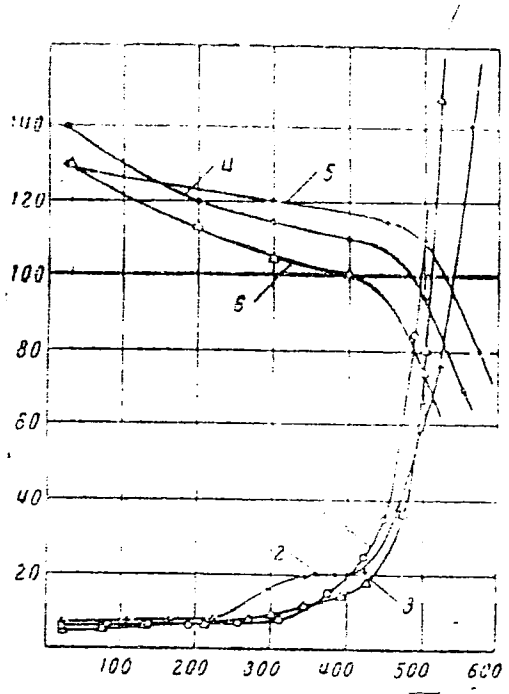
Fig. 1. Dependence of temperature curves of internal friction (1-3) and strength (4-5) of SN-2 and SN-3 steel on the mechapical and thermal treatment. Data on strength were taken from the article by M. F. Aleksenko:
1, 4-SN-2 steel, cold worked, aged at 480C for 1 hour; 2, 5-SN-3 steel, cold worked, aged at 450C for 1 hour; 3-SN-2 steel normalized from 975C, cold worked in nitrogen, aged, 6-the same, normalized from 950C, cold worked at -70C for 2 hours, aged.



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ENCLOSURE: 02

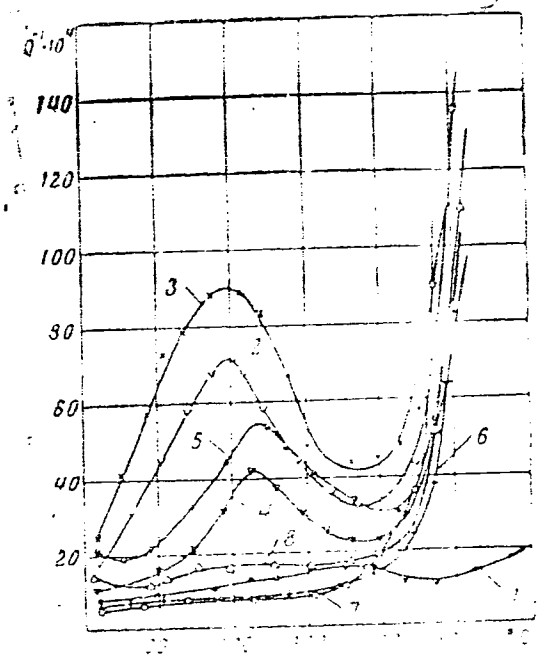

Fig. 2. Dependence of temperature curves of internal friction of SN-2 steel on mechanical and thermal treatment:
1-normalized from 975C; 2-normalized from 975C + cold working in nitorgen; 3-normalized from 975C + cold working at 70C; 4-normalized from 975C + compression of 41% 6-treatment the same as curve 2 + aging at 500C for 1 hour; 7-treatment the same as in curve 4 + aging; 8-treatment the same as curve 5 + aging.

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ACCESSION NR: AT4046870

ENCLOSURE: 03

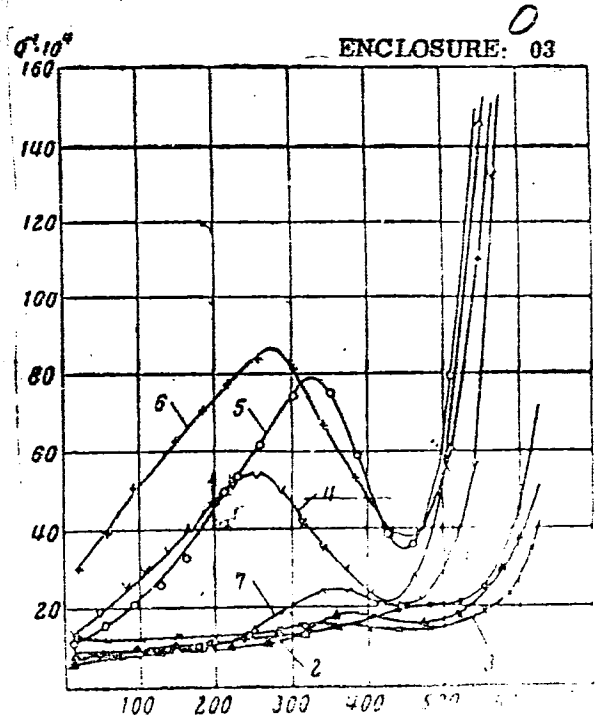

Fig. 3. Dependence of temperature curves of internal friction of SN-3 steel on mechanical and thermal treatment:
1-normalized from 930C;
2-normalized from 1050C;
3-normalized from 1100C;
4-normalized + cold working in nitrogen;
5-normalized + compression of 30%;
6-normalized + cold working in nitrogen + compression of 30%;
7-normalized + compression of 30% + aging.

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L 17320-65 EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(b) ASD(m)-3/SSD/AFWL/AFETR
ACCESSION NR: AP4049069 JD/HW S/0148/64/000/011/0149/0154

AUTHOR: Postnikov, V. S.; Usanov, V. V.; Sharshakov, I. M. B

TITLE: Effect of heat treatment on physical and mechanical properties of austenitic-martensitic steels

SOURCE: IVUZ. Chernaya metallurgiya, no. 11, 1964, 149-154

TOPIC TAGS: austenitic martensitic steel, precipitation hardenable steel, internal friction, resistivity, structure property

ABSTRACT: Five austenitic-martensitic stainless steels (see Table 1 of the Enclosure) were studied by measuring their internal friction and resistivity on cooling from 700—1200C and, in some cases, on heating in an attempt to determine the effect of annealing temperature on the character of structural changes and mechanical properties. The temperature dependence of the internal friction and resistivity of steels A, B, C, and E was found to follow the same pattern (see Fig. 1 of the Enclosure). No peaks were observed on internal friction-temperature or resistivity-temperature curves for steel D which, unlike the rest of the steels, had a fully

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L 17520-65
ACCESSION NR: AP4049069

austenitic structure after annealing and air cooling. Temperatures of the peaks of internal friction coincide with those of resistivity peaks and the M_s temperatures for A, B, C and E steels. The level of internal friction at room temperature drops continuously with annealing temperature increased up to 850—1000C and rises sharply with further increases of temperature. The latter increase is explained by an increased stability of austenite and by some changes in δ-ferrite, apparently a precipitation of σ-phase on the γ-δ interface. Orig. art. has: 4 figu.es and 1 table.

ASSOCIATION: Voronezhskiy politekhnicheskiy institut (Voronezh Polytechnic Institute)

SUBMITTED: 20Apr64 ENCL: 02 SUB CODE: MM

NO REF SOV: 009 OTHER: 000 ATD PRESS: 3151

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

L 17520-65
ACCESSION NR: AP4049069

ENCLOSURE: 01

Table 1. Chemical composition of austenitic-martensitic stainless steels

	C	Cr	Ni	Mo	W	Al
A	0,07	16,80	5,35	1,85	—	—
B	0,10	15,33	5,85	—	—	0,72
C	0,08	16,45	6,53	2,36	0,8	—
D	0,07	16,02	11,1	—	—	—
E	0,09	16,13	6,99	—	—	—

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L 17520-65
ACCESSION NR: AP4049069 ENCLOSURE: 02

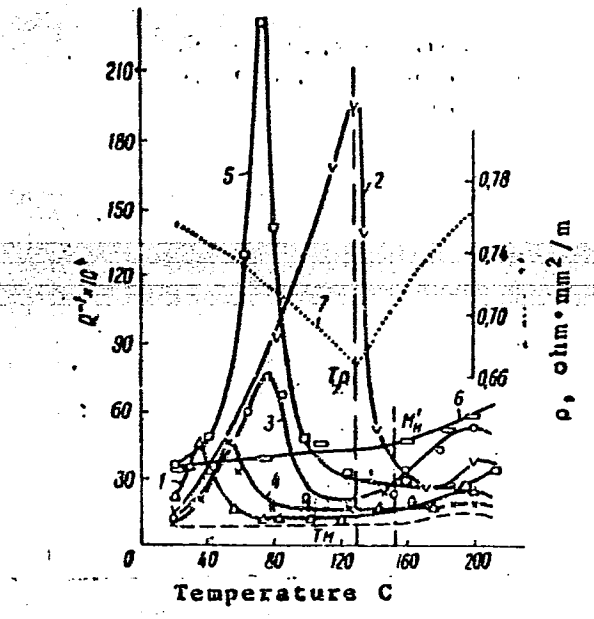

Fig. 1. Temperature dependence on internal friction of Steel A during cooling from 750C (1), 850C (2), 950C (3), 1050C (4), 1200C (5), and heated after cooling from 1200C (6), and of resistivity during cooling from 850C.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

L 40927-66 EWT(m)/T/EWP(t)/ETI IJP(c) JD

ACC NR: AP6030180 SOURCE CODE: UR/0148/66/000/005/0144/0146

50
B

AUTHOR: Postnikov, V. S.; Sharshakov, I. M.; Usanov, V. V.

ORG: Voronezh Polytechnical Institute (Voronezheskiy politekhnicheskiy institut)

TITLE: Amplitude frequency dependence of the internal friction of certain steels

SOURCE: IVUZ. Chernaya metallurgiya, no. 5, 1966, 144-146

TOPIC TAGS: internal friction, austenite transformation, plastic deformation, carbon steel, chromium steel, nickel steel, torsional vibration/50 carbon steel, Kh17N5M3 chromium steel, Kh16N6 chromium steel, Kh16N11 chromium steel

ABSTRACT: Any measure of internal friction is understandably divided into two components: amplitude-independent and amplitude-dependent. This division is arbitrary since these forms of internal friction usually overlap one another and likewise can be interrelated.

In connection with contradictory experimental data relative to the frequency relationship of the contributions of both types of internal friction and the almost complete lack of these data for low-frequency torsion vibrations, the present research was undertaken. Carbon steel 50 and chromium-nickel steels Kh17N5M3, Kh16N6, and Kh16N11 were used. The internal friction was measured on a torsion pendulum on specimens 1 mm in diameter and 100 mm long. The shear strain amplitude was measured between $3 \cdot 10^{-5}$ to $8 \cdot 10^{-4}$ and frequency from 0.4 to 18 cps. Recording of data at low frequencies was done visually but at the high frequencies with an N700 vibration oscilloscope.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

L 40927-66

ACC NR: AP6030180

Before measurement of internal friction all specimens were annealed in a closed quartz tube at 1050°C for 4 hours. The Cr-Ni-steel specimens were later subjected to normalization at 800-1100°C and the steel 50 specimens were quenched in water from 740°C.

Resulting data were in agreement with results obtained by others. The increase in shear strain amplitude to 1-2 · 10^{-4} does not change the value of internal friction. Further increase in the shear strain amplitude leads to an increase in internal friction.

The increase in internal friction level with the normalizing temperature decrease is associated with the transformation of austenite into martensite and their different inclination to plastic microdeformation.

The increase in vibration frequency of the specimen from 0.4 to 2.5 cps for steel Kh17N5M3 (and Kh16N11) and to 4 cps for steel 50 does not have any noticeable effect on the internal friction components. Further increase in vibration frequency of the specimen increases the internal friction whereupon the greater the shear strain amplitude the sharper the increase in internal friction. Orig. art. has: 4 figures. [JPRS: 36,774]

SUB CODE: 11, 20 / SUBM DATE: 17Dec64 / ORIG REF: 006 / OTH REF: 006

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APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

L 44397-66 EWT(m)/EWP(w)/T/EWP(t)/ETI/EWP(k) IJP(c) JD/HW

ACC NR: AP6024527 SOURCE CODE: UR/0148/66/000/007/0123/0125

AUTHOR: Sharshakov, I. M.; Postnikov, V. S.

ORG: Voronezh Polytechnic Institute (Voronezhskiy politekhnicheskiy institut)

TITLE: Some physicomechanical properties of austenitic-martensitic type steels

SOURCE: IVUZ. Chernaya metallurgiya, no. 7, 1966, 123-125

TOPIC TAGS: austenitic steel, martensitic steel, cold deformation, martensitic transformation, internal friction, mechanical property, magnetic property, metallographic examination / Kh17N5M3 steel, Kh16N6 steel

ABSTRACT: A stydy was made of the effect of plastic deformation on internal friction Q^{-1}, magnetic properties, ultimate strength and relative elongation for steels having the following compositions:

	C	Ni	Cr	Mo	Mn	Si
Kh17N5M3	0.08	5.33	15.95	3.08	0.20	0.24
Kh16N6	0.06	6.35	16.38	-	0.50	0.36

The steels were annealed, drawn into wire with diameters ranging from 0.71 to 0.95 mm, normalized at 975 (Kh16N6) and 930°C (Kh17N5M3) and again drawn into wire of 0.7 mm diameter; initial amounts of deformation were in the range 0-45%. The dependence of all physicomechanical properties on deformation was identical for both steels. In the

Card 1/2 UDC: 669.15-194.26'24'28:539.67:539.5

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L 44297-66

ACC NR: AP6024527

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first region (0-9% deformation) the values of Q^{-1}, strength and magnetization rose sharply while relative elongation dropped sharply. In the second region (9-20% deformation) the above properties changed only slightly. In the third region (20-45% deformation) Q^{-1}, strength and magnetization again rose while elongation dropped. The plastic deformation changed austenite into martensite resulting in strengthening. Microstructures consisted of residual austenite, carbides at grain boundaries and martensite. With increased amounts of deformation the quantity of martensite increased, raising magnetization due to the increased amount of ferromagnetic phase. For 0-10% deformation, the increased strength was not due to martensite but to cold working of austenite. In the second region, martensitic strengthening was slight but in the third region martensite played a dominent role in changing the properties. Orig. art. has: 2 figures, 1 table.

SUB CODE: 11,20/ SUBM DATE: 02Feb65/ ORIG REF: 010

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

L 47289-66 EWT(m)/T/EWP(t)/ETI IJP(c) JD

ACC NR: AP6032053 SOURCE CODE: UR/0148/66/000/009/0131/0136

60
59

AUTHOR: Sharshakov, I. M.; Postnikov, V. S.

ORG: Voronezh Polytechnical Institute (Voronezhskiy politekhnicheskiy institut)

TITLE: Temperature dependence of the mechanical properties of [precipitation-hardenable] austenitic-martensitic steels

SOURCE: IVUZ. Chernaya metallurgiya, no. 9, 1966, 131-136

TOPIC TAGS: SHEAR MODULUS, TEMPERATURE DEPENDENCE, INTERNAL FRICTION, TENSILE STRENGTH, austenitic martensitic steel, steel property, precipitation hardening steel, stainless steel, chromium nickel molybdenum steel/Kh17N5M3 steel, Kh16N6 steel

ABSTRACT: The effects of heat treatment, chemical composition and strain hardening on the internal friction and mechanical properties of Kh17N5M3 precipitation-hardenable steel (nickel-5.33%, chromium-15.95%, molybdenum-3.08%, and copper-0.18%) and Kh16N6 [AISI301] stainless steel at 20—550C has been investigated. Steel specimens, after being heat treated under various conditions, were tested. On the basis of obtained results, the temperature dependence of internal friction, tensile strength and sheer modulus was plotted. Fig. 1 shows this dependence for Kh17N5M3 steel with curve numbers referring to the following heat treatments: 7 - annealed at 1500C for 4 hr and furnace cooled; 8 - same as 7 and additionally annealed at 930C for 20 min and air cooled; 9 - annealed at 930C for 20 min and air cooled; 10 - same as 9 and additionally refrigerated at -78C; 11 - annealed at 1000C and air cooled. It was

Card 1/3 UDC: 669.15-194:669.26'24'28:620.17

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ACC NR: AP6032053

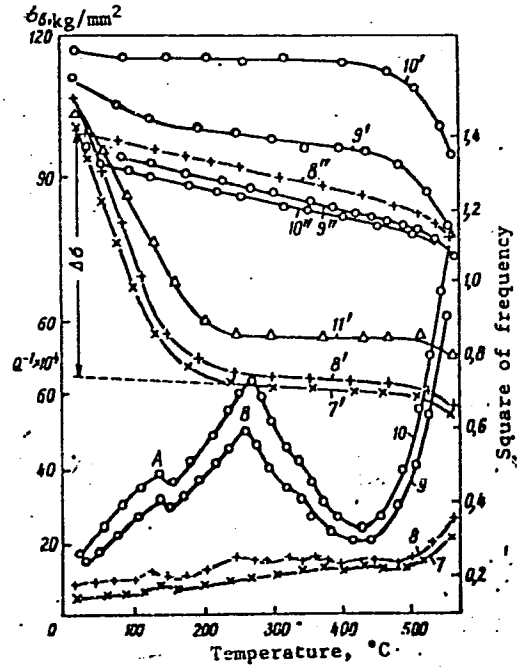

Fig. 1. Temperature dependence of internal friction ($Q^{-1} \cdot 10^{-4}$) curves 7—10, tensile strength (δ_b) curves 7'—10', and shear modulus (square of frequency) curves 7"—10" for Kh17N5M3 steel

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L 47289-66

ACC NR: AP6032053 d

found that during tensile tests at 20C, austenite transforms into martensite. No martensite was found in the furnace-cooled specimens at 60—150C. However, martensite forms at that temperature range under the effect of deformation. Therefore, the values of tensile strength obtained in tensile tests at temperatures below 150C are higher than those which can be expected on the basis of initial structure. The strength of strain-hardened or refrigerated specimens was not greatly affected by stretching since martensite transformation has already taken place during refrigeration or deformation. For instance, the tensile strength of Kh16N6 steel specimens which were not strain-hardened was 98.8 kg/mm^2 at 20C and 55.1 kg/mm^2 at 150C. The strength of strain-hardened specimens with 12% deformation was 113 kg/mm^2 at 20C and 82.8 kg/mm^2 at 150C; with 45% deformation it was 160 kg/mm^2 at 20C and 151 kg/mm^2 at 150C. Thus, the difference between the values of tensile strength at 20 and 150C drops with increased martensite content and increased reduction. Orig. art. has: 4 figures and 1 table. [TD]

SUB CODE: 11/ SUBM DATE: 08Feb65/ ORIG REF: 009/ OTH REF: 002/ ATD PRESS: 5093

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APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARSHANOV, A.A.

AUTHOR: STEPANOV,K.N., SHARSHANOV,A.A. PA - 2265

TITLE: Strong Focussing in Linear Electronic Accelerators. (Sil'naya fokussirovka v lineynykh elektronnykh uskoritelyakh, Russian).

PERIODICAL: Atomnaia Energiia, 1957, Vol 2, Nr 2, pp 178-179 (U.S.S.R.)

Received: 3 / 1957 Reviewed: 5 / 1957

ABSTRACT: In linear electronic accelerators working with a propagated wave the radial focussing of the particles the velocity v of which does not yet attain the velocity of light c is usually realized by means of a longitudinal magnetic field. With $v \to c$ the defocussing power exercised on the electron by the high-frequency field shows a tendency towards zero. The deviation r of the particle from the axis of the accelerator in this case grows slowly with growing energy. If such a bundle can be produced that r is small at the output of the bundle from the accelerator, it is obvious that no additional focussing is necessary. If this is not possible, or if greater demands are made on the smallness of r, additional focussing becomes necessary. This additional focussing can be realized by a system of alternatingly focussing and defocussing magnetic or electric quadrupole lenses. In this respect the following is here presupposed: Along the accelerator, magnetic quadrupole lenses are fitted in such a manner that every n-th sector of the system consists of two quadrupoles. Furthermore, the energy increase of the particle in the n-th sector must be small compared to the energy of the particle at the beginning of the n-th sector. If, besides, the lenticular parameters change only little with a change of the number n, the

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PA - 2265

Strong Focussing in Linear Electronic Accelerators.

equations of motion of the particle are differential equations with almost periodic coefficients. For the solution of these equations see A.A.SHARSHANOV, Otchet FTI AN USSR (= report of the Physical-Technical Institute of the Ukrainian Academy of Science, reviewers's note). Formulae are given for the amplitude of the oscillations of the particle; furthermore, an expression for the maximum angle difference is given. - An estimation shows that it is necessary to produce magnetic fields with a gradient of $H'_n \sim 10 - 100$ gauss/cm for the focussing of electrons in linear accelerators by magnetic lenses, where the length of the quadrupoles is $l_n \sim 20 - 200$ cm. It is useful to arrange the lenses at great distances from one another in such a way that $D_n \gg l_n$ and $D_n \gg d_n$ applies. (No illustrations).

ASSOCIATION: Not given
PRESENTED BY:
SUBMITTED: 19.9.1956
AVAILABLE: Library of Congress

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APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARSHANOV, A.A.

Theory of particle beam focusing by means of a transverse lens system in the linear accelerator. Atom.energ.supplement no.4:83-92 '57. (MIRA 10:10)

(Particle accelerators)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

Sharshanov, A. A.

AUTHORS: Sharshanov, A. A., Stepanov, K. N. 57-27-7-10/40

TITLE: On the Propagation of Electromagnetic Waves in Almost Periodic Wave Guides (O rasprostranenii elektromagnitnykh voln v volnovodakh, blizkikh k periodicheskim)

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1957, Vol. 27, Nr 7, pp. 1474-1481 (USSR)

ABSTRACT: The propagation of electromagnetic waves in a chain of endovibrators connected with each other by small holes and in wave guides "loaded" with dielectric disks is investigated. It is assumed that the systems are almost periodic. At first the equations for the wave-propagation in the chain of endovibrators are derived and the wave propagation with a frequency near to the transmission-band is investigated. Then the wave propagation in the wave guide loaded with dielectric disks is investigated and the system of equations for it is derived. Finally the differential equations with slowly varying coefficients are solved. There are 7 references, 6 of which are Soviet.

ASSOCIATION: Physico-Technical Institute AS Ukrainian SSR, Khar'kov (Fiziko-tekhnicheskiy institut AN USSR, Khar'kov)

SUBMITTED: June 21, 1956

Card 1/1 1. Electromagnetic waves-Propagation 2. Wave guides-Applications

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

AUTHORS Stepanov,K.N., Sharshanov A.A., 57-8-29/36

TITLE The Strong Focusing in Linear Electronic Accelerators. (Sil'naya fokusirovka v lineynykh elektronnykh uskoritelyakh-Russian)

PERIODICAL Zhurnal Tekhn.Fiz.,1957,Vol 27,Nr 8,pp 1863-1869 (U.S.S.R.)

ABSTRACT The radial motion of a strongly relativistic electron in a linear accelerator with strong focusing is investigated.Magnetic quadrupoles are absorbed along the accelerator.This is carried out in such a way that the n^{th} sector consists of two quadrupoles of a length of 1_n(each).The quadrupoles create a magnetic field:

$$H_x = \pm H'_n y \ , \qquad H_y = \pm H'_n x \ , \qquad H_z = 0$$

The plus sign refers to the first and the minus sign to the second lens.The first defocuses in direction y and focuses in direction x. The second focuses in direction y and defocuses in direction x.The authors show that for the focusing of electrons in a linear accelerator by means of magnetic quadrupoles it is necessary to produce magnetic fields with a gradient $H'_n \sim 10\text{-}50$ Gauss/cm and a quadrupole length of $1_n \sim 20 - 200$ cm.
(4 Slavic references).

ASSOCIATION Khar'kov Physical Technical Institute of the Academy of Sciences of the Ukrainian SSR.
(Fiziko-tekhnicheskiy institut AN USSR,Khar'kov).

SUBMITTED February 9, 1957
AVAILABLE Library of Congress

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

16(1) 05781

AUTHOR: Sharshanov, A.A. (Khar'kov) SOV/41-11-4-7/15

TITLE: Extension of Floquet's Theorem to Nonlinear Equations

PERIODICAL: Ukrainskiy matematicheskiy zhurnal, 1959,Vol 11,Nr 4,pp 413-430 (USSR)

ABSTRACT: The well-known theorem of Floquet on the existence of two linearly independent solutions of a certain kind for systems of two linear differential equations with periodic coefficients is formulated at first in the following weakened form: For a system of two linear differential equations with periodic coefficients a system of two equations with constant coefficients can be given so that for the same initial conditions the values of the solutions of both systems are identical for t-values which are equal to an integral number of periods. The author shows that under certain assumptions this weakened formulation of the theorem can be transferred to the nonlinear case.
The author mentions A.N.Korkin. He thanks N.I.Akhiyezer and A.D.Myshkis for the discussion of the results.
There are 7 references, 4 of which are Soviet, and 3 French.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

16(1) SOV/20-127-6-10/51

AUTHOR: Sharshanov, A.A.

TITLE: Extension of Floc's Theorem to Nonlinear Equations

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 6, pp 1179-1182 (USSR)

ABSTRACT: Given two real functions $u(x,y)$ and $v(x,y)$. Problem: Find functions $u(x,y,t)$, $v(x,y,t)$ satisfying the following conditions:

1. $u(x,y,0) = x$, $v(x,y,0) = y$
2. $u(x,y,1) = u(x,y)$, $v(x,y,1) = v(x,y)$
3. $u[u(x,y,t_1), v(x,y,t_1), t_2] = u(x,y,t_1+t_2)$

$v[u(x,y,t_1), v(x,y,t_1), t_2] = v(x,y,t_1+t_2)$.

Theorem 1: If $u(x,y)$, $v(x,y)$ in the neighborhood of the origin admit the series representations

$$u(x,y) = A_{10}x + A_{01}y + A_{20}x^2 + A_{11}xy + \dots$$

$$v(x,y) = B_{10}x + B_{01}y + B_{20}x^2 + B_{11}xy + \dots ,$$

where

$$(4)\quad \Delta = \begin{vmatrix} A_{10} & A_{01} \\ B_{10} & B_{01} \end{vmatrix} > 0,$$

if besides either

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(8) $\left|\frac{A_{10}+B_{01}}{2\sqrt{\Delta}}\right|<1, \quad \Delta \neq 1$

or

(9) $\left|\frac{A_{10}+B_{01}}{2\sqrt{\Delta}}\right|>1, \quad \left|\frac{p}{iD}\right|>1$

and

(20) $\pm \frac{p}{iD} \neq \frac{l-k}{l+k}$,

where

(7) $p = \ln\sqrt{\Delta}, \quad \cos D = \frac{A_{10}+B_{01}}{2\sqrt{\Delta}}$,

and $l \geq 0$, $k \geq -1$ are integers, then there exists a neighborhood of the point $x = 0$, $y = 0$ in which

(10)
$$u(x,y,t)=\alpha_{10}(t)x+\alpha_{01}(t)y+\alpha_{20}(t)x^2+\alpha_{11}(t)xy+\alpha_{02}(t)y^2+\ldots.$$
$$v(x,y,t)=\beta_{10}(t)x+\beta_{01}(t)y+\beta_{20}(t)x^2+\beta_{11}(t)xy+\beta_{02}(t)y^2+\ldots. .$$

The theorem is used for finding for a nonlinear system of differential equations the right sides of which are explicit periodic functions of the time, a system of differential equations with just as many equations the right sides of which do not depend on t, where the solutions of both systems agree

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Extension of Floc's Theorem to Nonlinear Equations SOV/20-127-6-10/51

in the points m·T of the t-axis, where m is integral and T is the period. For this aim the method of analytic iteration of A.N. Korkin is generalized to the case of two variables. The author thanks N.I.Akhiyezer and A.D.Myshkis for discussions.
There are 6 references, 3 of which are Soviet, and 3 French.

ASSOCIATION: Institut matematiki Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Mathematics of the Sibirian Section of the AS USSR)

PRESENTED: May 4, 1959, by S.L.Sobolev, Academician

SUBMITTED: April 14, 1959

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

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AUTHOR: Sharshanov, A.A.

16

TITLE: Systems of Ordinary Differential Equations With an Explicit Periodical Dependence on the Argument

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 1, pp 67-70

TEXT: The paper is a continuation of (Ref. 1). Given functions $u(x,y,z)$ and $v(x,y,z)$; $\frac{D(u,v)}{D(x,y)} > 0$ periodic in z (period = 1), analytic in x,y, and piecewise differentiable in z. The author seeks functions $u(x,y,z,t)$ and $v(x,y,z,t)$ which are periodic in z (period = 1), sufficiently often differentiable with respect to t , analytic in x,y, for which $\frac{D(u,v)}{D(x,y)} \neq 0$ and which satisfy the conditions :

1) $u(x,y,z,0) = x$; $v(x,y,z,0) = y$

2) $u(x,y,z,1) = u(x,y,z)$; $v(x,y,z,1) = v(x,y,z)$

3) $u\left[u(x,y,z,t), v(x,y,z,t), z + t_1, t_2\right] = u(x,y,z,t_1 + t_2)$

$v\left[u(x,y,z,t_1), v(x,y,z,t_1), z + t_1, t_2\right] = v(x,y,z,t_1 + t_2)$

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If the functions exist, then they satisfy the system

$$(2) \qquad \frac{du}{dt} = \varphi(u,v,\tau) \ , \ \frac{dv}{dt} = \psi(u,v,\tau) \ , \ \frac{d\tau}{dt} = 1$$

where $\tau = z + t$ and φ and ψ have the period in τ.
Theorem 1: Let $u_1(x,y,z)$, $v_1(x,y,z)$ and $u_2(x,y,z)$, $v_2(x,y,z)$ satisfy the above conditions ; for an integral n let $u_1(x,y,n) = u_2(x,y,n)$, $v_1(x,y,n) = v_2(x,y,n)$; for $z \neq n$ let the functions be arbitrarily different. Then the two corresponding systems (2) with the right sides φ_1, ψ_1 and φ_2, ψ_2 have solutions which agree for equal initial conditions for t-values being equal to an integral number of periods.
Theorem 2: In the neighborhood of the point x=y=0 let

$$(4)\begin{cases} u(x,y,z) = \alpha(z) + A_{10}(z)(x-\alpha(z)) + A_{01}(z)(y-\beta(z)) + A_{20}(z)(x-\alpha(z))^2 + \dots \\ v(x,y,z) = \beta(z) + B_{10}(z)(x-\alpha(z)) + B_{01}(z)(y-\beta(z)) + B_{20}(z)(x-\alpha(z))^2 + \dots \end{cases}$$

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

Systems of Ordinary Differential Equations S/020/60/132/01/16/064
With an Explicit Periodical Dependence on the Argument

where $\alpha(z) = \beta(z) = 0$. Let the roots ρ_1, ρ_2 of

$$(5) \quad \begin{vmatrix} A_{10}(z) - \rho & A_{01}(z) \\ B_{10}(z) & B_{01}(z) - \rho \end{vmatrix} = 0$$

do not depend on z and let them be either 1) complex conjugated and different or 2) real, where $\rho_1 \rho_2 > 0$, $\rho_1 \neq \rho_2$, $\rho_1 \neq \rho_1^{n-q} \rho_2^q$, $\rho_2 \neq \rho_1^{n-q} \rho_2^q$ and either $|\rho_1| < 1$, $|\rho_2| < 1$ or $|\rho_1| > 1$, $|\rho_2| > 1$.
Then for every finite t there exists a neighborhood of $x = y = 0$ in which $u(x,y,z,t)$ and $v(x,y,z,t)$ are representable as the series

$$(6) \quad \begin{aligned} u(x,y,z,t) &= \alpha(z + t) + \alpha_{10}(z,t)(x - \alpha(z)) + \alpha_{01}(z,t)(y - \beta(z) + \cdots \\ +v(x,y,z,t) &= \beta(z + t) + \beta_{10}(z,t)(x - \alpha(z)) + \beta_{01}(z,t)(y - \beta(z)) + \cdots \end{aligned}$$

with periodic coefficients.
The author mentions A.N. Korkin. He thanks N.I. Akhiyezer for discussions.

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Systems of Ordinary Differential Equations S/020/60/132/01/16/064
With an Explicit Periodical Dependence on the Argument

There are 2 Soviet references.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk Ukr SSR
(Physical-Technical Institute AS Ukr SSR)

PRESENTED: December 28, 1959, by S.L. Sobolev, Academician

SUBMITTED: December 17, 1959

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

S/041/62/014/001/003/007
B112/B104

AUTHOR: Sharshanov, A. A. (Kharkov)

TITLE: Systems of ordinary differential equations with explicit periodic dependence on the argument

PERIODICAL: Ukrainskiy matematicheskiy zhurnal, v. 14, no. 1, 1962, 69 - 86

TEXT: The following problem is considered. Given functions u, v are dependent on the arguments x, y, z, partially differentiable with respect to z, and periodic with respect to this argument with a period equal to unity. In addition, the functions u, v are analytic with respect to the two other arguments, and $D(u,v)/D(x,y) > 0$ with any z for all values of x,y of the region under consideration. Then, periodic functions u,v are sought, which satisfy the conditions

1) $u(x,y,z,0) = x, \quad v(x,y,z,0) = y;$

2) $u(x,y,z,1) = u(x,y,z), \quad v(x,y,z,1) = v(x,y,z);$

3) $u[u(x,y,z,t_1), v(x,y,z,t_1), z+t_1,t_2] = u(x,y,z,t_1+t_2),$

$v[u(x,y,z,t_1), v(x,y,z,t_1), z+t_1,t_2] = v(x,y,z,t_1+t_2).$

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and are analytic in x, y and differentiable a sufficient number of times with respect to t, where $D(u,v)/D(x,y)$ differs from zero for all real values of z, t and the values of x, y under consideration. Certain conditions are derived, under which the solutions of this problem can be regarded as solutions of the system of ordinary differential equations $du/dt = \varphi(u,v,\tau)$, $dv/dt = \psi(u,v,\tau)$, $d\tau/dt = 1$, where the functions φ and ψ are periodic with respect to τ. There are 3 Soviet references.

SUBMITTED: October 24, 1959

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S/057/62/032/004/002/017
B125/B108

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AUTHOR: Sharshanov, A. A.

TITLE: Some problems of the steadiness of motion of a charged particle in a stellarator-type magnetic field

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 32, no. 4, 1962, 395-401

TEXT: The steadiness of the motion of particles in a stellarator system is investigated. A longitudinal constant magnetic field $H_z = H$ is induced by an infinitely long coil densely occupied with magnetic lenses of the length l (Fig. 1a). Every lens is rotated through 45° with respect to its nearest neighbors. The shape of the magnetic field within the cylindrical coil

$$H_z = \text{const},\quad H_x = \begin{cases} ky, \\ -kx, \\ -ky, \\ kx, \end{cases} \qquad H_y = \begin{cases} kx & 0 < z < OO_1, \\ ky & OO_1 < z < OO_2, \\ -kx & OO_2 < z < OO_3, \\ -ky & OO_3 < z < OO_4, \end{cases} \tag{1.1}$$

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(k = constant) repeats periodically right and left of the distance 00_4. The inequality $\mathrm{ch}(kl/H)/\sqrt{2} < 1$ is the condition for the existence of closed magnetic surfaces. The time-independent set of differential equations

$$\left.\begin{aligned}\frac{d^2x}{dz^2} &= \frac{e}{mcv}\left[\frac{dy}{dz}H_z - H_y - \left(\frac{dx}{dz}\right)^2 H_y + \frac{dx}{dz}\frac{dy}{dz}H_x\right]\times \\ &\quad \times\sqrt{1+\left(\frac{dx}{dz}\right)^2+\left(\frac{dy}{dz}\right)^2}, \\ \frac{d^2y}{dz^2} &= \frac{e}{mcv}\left[-\frac{dx}{dz}H_z + H_x - \frac{dx}{dz}\frac{dy}{dz}H_y + \left(\frac{dy}{dz}\right)^2 H_x\right]\times \\ &\quad \times\sqrt{1+\left(\frac{dx}{dz}\right)^2+\left(\frac{dy}{dz}\right)^2}.\end{aligned}\right\} \qquad (2.1)$$

resulting for v^2 = const (v = modulus of total particle velocity) yields with the substitutions $x \equiv U_1$, $y \equiv U_2$; $dx/dz \equiv U_3$, $dy/dz \equiv U_4$ a set of four first-order equations. The nonlinear system of functions $U_1(z)$, $U_2(z)$, $U_3(z)$, and $U_4(z)$ behaves similarly to its linear approximation near its stationary point $x_1 = x_2 = x_3 = x_4 = 0$. This criterion for the stability

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of the nonlinear solution is necessary (its sufficiency has to be proved additionally), but the criterion for the instability is sufficient. The equations for the interval on the axis taken by the n-th lens can be derived from the set of equations for the interval of the (n-1)st lens by the matrix β. Similarly, the solutions

U_1^I, U_2^I, U_3^I, U_4^I at the end of the first lens are expressed by the matrix B in terms of the solutions x_1, x_2, x_3, x_4 at the beginning of the first lens. The two transformations together give

$$(U_1^{IV}, U_2^{IV}, U_3^{IV}, U_4^{IV}) = -(\beta B)^4(x_1, x_2, x_3, x_4) \qquad (2.14).$$

The characteristic roots ϱ_1, ϱ_2, ϱ_3, ϱ_4 of the equation $|-(\beta B)^4 - E\varrho| = 0$ can be expressed by the roots μ_1, μ_2, μ_3, μ_4 of the equation $|\beta B - E\mu| = 0$, and permit conclusions on the stability of motion. (2.16) can be transformed to $\mu^4 + a\mu^3 + b\mu^2 + a\mu + 1 = 0$ with $\mu_1 = e^{\lambda_1}$, $\mu_2 = e^{-\lambda_1}$, $\mu_3 = e^{\lambda_2}$, $\mu_4 = e^{-\lambda_2}$. The inequalities $|ch\lambda_1| < 1$ and

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$|ch\lambda_2| < 1$ are the necessary condition for the stability of the axial motion of particles in the magnetic field. The sufficiency of this condition has to be proved separately. The motion may also be steady for unclosed magnetic surfaces and, on the other hand, the axial motion may be unsteady for closed magnetic surfaces. With $R = mcv/eH \ll 1$, the conditions for the stability of motion agree with the condition for the existence of closed magnetic surfaces. There are 2 figures and 2 Soviet references.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN USSR Khar'kov (Physico-technical Institute AS UkrSSR Khar'kov)

SUBMITTED: January 27, 1961 (initially), May 29, 1961 (after revision)

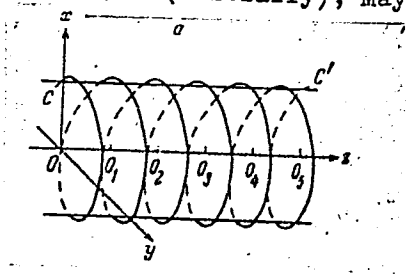

Fig. 1a

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S/020/62/143/003/008/029
B112/B102

AUTHOR: Sharshanov, A. A.

TITLE: Analytic iteration of functions of two variables

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 143, no. 3, 1962, 551 - 554

TEXT: The functional equations

$$u(x,y,0) = x,\ v(x,y,0) = y,$$
$$u(x,y,1) = u(x,y),\ v(x,y,1) = v(x,y),$$
$$u(u(x,y,t_1),v(x,y,t_1),t_2) = u(x,y,t_1+t_2),$$
$$v(u(x,y,t_1),v(x,y,t_1),t_2) = v(x,y,t_1+t_2),$$

where

$$u(x,y) = \rho_1 x + A_{20}x^2 + A_{11}xy + A_{02}y^2 + \ldots,$$
$$v(x,y) = \rho_2 y + B_{20}x^2 + B_{11}xy + B_{02}y^2 + \ldots$$

($\rho_1 \neq \rho_2$, $\rho_1 \neq 1$, $\rho_2 \neq 1$, $\rho_1\rho_2 > 0$), are solved by series expansions

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Analytic iteration of functions ... S/020/62/143/003/008/029
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$$u(x,y,t) = \rho_1^t x + \alpha_{20}(t)x^2 + \alpha_{11}(t)xy + \alpha_{02}(t)y^2 + \ldots,$$

$$v(x,y,t) = \rho_2^t y + \beta_{20}(t)x^2 + \beta_{11}(t)xy + \beta_{02}(t)y^2 + \ldots .$$

The functions $\alpha_{mp}(t)$, $\beta_{mp}(t)$ $(m + p \geqslant 2)$ are shown to be polynomials in ρ_1^t, ρ_2^t, t with constant coefficients. As an example, functions u(x,y), v(x,y) are considered, which satisfy the differential equations $du/dt = v$, $dv/dt = -\omega^2 \sin u - \gamma v$. There are 1 figure and 2 Soviet references.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk USSR (Physico-technical Institute of the Academy of Sciences UkrSSR)

PRESENTED: October 23, 1961, by S. L. Sobolev, Academician

SUBMITTED: October 16, 1961

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GOLODNIKOV, G.V.; SHARSHARINA, V.V.

Catalytic dehydrogenation of γ-trialkylsilylpropyl alcohols. Part 2. Zhur.ob.khim. 33 no.10:3262-3264 O '63. (MIRA 16:11)

1. Leningradskiy gosudarstvennyy universitet.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

Sharshatkina, A.V.

AUTHORS: Skakov, Yu. A. , Chernikova, I. N. , Sharshatkina, A. V. 20-2-21/60

TITLE: On Structure and Composition of Carbide in Low-Drawn Steel (O strukture i sostave karbida nizkootpushchennoy stali)

PERIODICAL: Doklady AN SSSR, 1958, Vol. 118, Nr 2, pp. 284 - 285 (USSR)

ABSTRACT: First there is a short reference on previous studies, dealing with the same subject. The authors examined by electronographical ways, the drawing of carbonaceous steel of the following composition (in %): 0,58 % C, 0,10 % Mn, 0,08 % Si, 0,033 % S, 0,005 % P and 0,017 % N. The samples were chilled in water and drawn at the temperatures of 100, 200 and 400°C. After careful metallographical preparations of the test-pieces and with application of a deep-going electrolytic pickling (in aqueous solution of KCl with addition of citric acid), the electronograms were taken "on reflection". In the case of the test-pieces, which were drawn at 100°C, satisfactory electronograms could not be obtained. The results, which were obtained after drawing at 200° and 400° are illustrated in two diagrams and in one table. The carbide of the low-drawn

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steel has a hexagonal lattice with a tight packing of the atoms of iron; the lattice unit has the dimension a = 2,73 Å and c = 4,34 Å. In case of drawing at 200° probably a small quantity of cementite results. After drawing at 400° there practically is no more hexagonal carbide. In the electronogram of hexagonal carbide the reflections with the indicas (001) and (hkl) with h + k = 3n, if l ≠ 2n, i.e. the structure of carbide is exactly one of the structures of the ε-phase of the system iron-nitrogen, are missing. The non-metallic atoms statistically are orientated equally in the octahedral pores of the hexagonal compact lattice, which is formed by the iron atoms. Such a structure can form in a large range of concentration and the formula Me_2X is valid for the limits of the percentage of the non-metallic component. Further the authors geometrically computed the carbon content in the carbide of low-drawn steel and they found for "ε - carbide" a carbon content of about 16 atom per cent. The calculation, based upon the change of the period a, gives a percentage of 18 % C. Therefore can be assumed that the composition of the "ε - carbide" nearly is described by the formula Fe_4C. There are 2 figures, 1 table, and 7 references,

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On Structure and Composition of Carbide in Low-Drawn Steel 20-2-21/60

5 of which are Slavic.

ASSOCIATION: Institute for Steel imeni I. V. Stalin, Moscow (Moskovskiy institut stali im. I. V. Stalina)

PRESENTED: July 19, 1957, by G. V. Kurdyumov, Academician

SUBMITTED: July 5, 1957

AVAILABLE: Library of Congress

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

7(6), 9(0), 18(7) SOV/32-25-1-26/51

AUTHORS: Skakov, Yu. A., Arengol'd, M. B., Sharzhatkina, A. V.

TITLE: Electron Microscopic and Electronographic Investigation of the Transparency of Foils (Metal Laminas) (Elektronno-mikroskopicheskoye i elektronograficheskoye issledovaniye na prosvet plenok)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 1, pp 64 - 65 (USSR)

ABSTRACT: A method is described for the electrolytic dilution of samples from composed alloys (of the K40NKhM and Gatfil'd steel). The strips (20 x 40 mm) of the alloy under investigation were diluted by electrolysis to approximately 0.1 mm thickness. For the two alloys mentioned above an electrolyte consisting of 195 cm^3 H_3PO_4 + 30 g CrO_3 was employed at a current density of about 0.2 ampere/cm^2. The electronographic investigation of the laminal transparency can be carried out by the EM-4 electronograph. The method described provides an explanation of the structural changes at a low temperature deformation and hardening of the K40NKhM alloy. A second

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group of lines was observed ($\frac{d}{n}$ = 2.15 and 1.95 Å), that apparently corresponds to that alloy portion having a higher molybdenum and carbon content. After hardening at 700°, the presence of a carbide phase of the type $Co_3Mo_3[(Co,Fe,Cr)_3(Mo,Cr)_3C$ with cubic lattice, α=11,0 Å] was ascertained. The method described is recommended for the investigation of the chemical heterogeneity and the structural disturbances of the alloy basis.

ASSOCIATION: Moskovskiy institut stali im. I. V. Stalina (Moscow Steel Institute imeni I. V. Stalin)

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SKAKOV, Yu.A., kand.tekhn.nauk; MAKSIMOV, S.K., inzh.; SHARSHATKINA, A.V., inzh.

Structural changes during the aging of commercial iron. Metalloved. i term. obr. met. no.3:20-24 Mr '62. (MIRA 15:2)

1. Moskovskiy institut stali.
(Iron--Metallography)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

PANCHENKO, Yelena Vasil'yevna, dots.; SKAKOV, Yuriy Aleksandrovich, dots.; KRIMER, Boris Isaakovich, dots.; ARSENT'YEV, Petr Pavlovich, dots.; TSVILING, Mira Yakovlevna, assistent; POPOV, Konstantin Viktorovich, dots.; Prinimala uchastiye SHARSHAVKINA, A.V.; LIVSHITS, B.G., doktor tekhn. nauk, prof., red.

[Metallographic laboratory] Laboratoriia metallografii. Moskva, Metallurgiia, 1965. 439 p. (MIRA 18:9)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARSHAVENKOV, Vasiliy Ivanovich, svinar'; KANDYBIN, M., red.; IVANOV,N., tekhn. red.

[New method of raising swine] Novyi metod soderzhaniia svinei. Kaluga, Kaluzhskoe knizhnoe izd-vo, 1960. 43 p. (MIRA 14:10)

1. Sovkhoz "Chkalovskiy", Lev-Tolstovskogo rayona Kaluzhskoy oblasti (for Sharshavenkov).

(Swine)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARSHAVENKOV, Vasiliy Ivanovich, svinar'-mekhanizator; VISHNYAKOVA, Ye.A., red.; KLYUCHEVA, T.D., tekhn.red.

[One centner of pork per hour] TSentner svininy za chas. Moskva, Izd-vo "Sovetskaia Rossiia," 1961. 62 p.
(MIRA 15:5)

1. Sovkhoz "Chkalovskiy" Kalizhskoy oblasti (for Sharshavenkov).
(Swine)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHARSHAVIN, V. A.

Radio - v kolkhozy. [Radio for collective farms]. (Radio, Feb. 1949, no. 2, p. 3-5).
DLC: TK540.R76

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

SHASHAYEV, M.A.; SHAPIRO, I.L.; SHATALOVA, A.L.

Duration of the detection of plague and pseudotuberculosis bacteriophages from the organism of greater gerbils. Zhur. mikrobiol., epid. i immun. 42 no.3:97-101 Mr '65.

(MIRA 18:6)

1. Sredne-Aziatskiy nauchno-issledovatel'skiy protivochumnyy institut i Taldy-Kurganskaya protivochumnaya stantsiya.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

IGNATENKO, T.A., otvetstvennyy red.; MUSAYEV, A.M., red.; SHARSHENOV, K.Sh., red.

[Collection of reports delivered at the second session of the Kirghizistan "Pedagogical lectures" on physics and mathematics] Sbornik dokladov, prochitannykh na vtoroi sessii Respublikanskikh "Pedagogicheskikh chtenii" po fizike i matematike. Frunze, 1954. 52 p. (MIRA 10:12)

1. Frunze, Kirgizskiy nauchno-issledovatel'skiy institut pedagogiki. (Physics--Study and teaching) (Mathematics--Study and teaching)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

L 10765-66 EWT(1)/EWP(m)/FS(v)-3/T/EWA(m)-2 IJP(c) GW

ACC NR: AP5028907 SOURCE CODE: UR/0020/65/165/003/0510/0513

AUTHORS: Stanyukovich, K. P.; Sharshekeyev, O.; Gurovich, V. Ts.

55 44 55 44 55 44

ORG: none

TITLE: Self-similar motion of relativistic gas in the general theory of relativity for a case of point symmetry

21,44,55 21,44,55

SOURCE: AN SSSR. Doklady, v. 165, no. 3, 1965, 510-513

TOPIC TAGS: relativistic gas, astrophysics, special theory of relativity, general theory of relativity, isentropic flow

ABSTRACT: Starting with the Einstein equations $R_i^k - {}^1/_2\delta_i^k R = \varkappa T_i^k$, the following set of adiabatic motion equation is obtained for a relativistic gas

$$\frac{d(wu_i)}{ds} + \frac{\partial w}{\partial x^i} = \frac{w}{2} u^k u^l \frac{\partial g_{kl}}{\partial x^i} + T\frac{\partial \sigma}{\partial x^i},$$

$$\frac{\partial}{\partial x^k}\left(\frac{u^k}{V}\sqrt{-g}\right) = 0, \quad \frac{d\sigma}{ds} = 0$$

where w and σ are the energy content and the entropy, respectively. These can be expressed through the pressure P and specific volume V or

$$w = \frac{k}{k-1} PV + ac^2, \quad pV^k = \sigma.$$

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UDC: 532.501.11

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The above equations are then written in logarithmic form and are shown to differ from the special theory of relativity by the presence of the two functions λ and ν, $(d\tau_0 = e^{(\lambda-\nu)/2}dt)$. The self-similar solution is obtained through the functions

$$a = \xi_1(z), \quad 1/V = t^{m_2}\xi_2(z), \quad P = t^{m_3}\xi_3(z),$$
$$e^{\lambda} = t^{m_4}\xi_4(z), \quad e^{\nu} = t^{m_5}\xi_5(z), \quad z = r/t,$$

which lead to a set of five ordinary differential equations in the unknowns $\xi_1 - \xi_5$. It is shown that, in general, the self-similar solution does not admit of an isentropic flow. Finally, an ultrarelativistic flow is considered with the similarity functions

$$a = \xi_1(z), \quad 1/V = t^{m_2}\xi_2(z), \quad P = t^{m_3}\xi_3(z),$$
$$e^{\lambda} = t^{m_4}\xi_4(z), \quad e^{\nu} = t^{m_5}\xi_5(z), \quad z = r/t.$$

The special case of the motion of a dust type particle in a gravitational field is considered where P = 0 and a = a(λ). The solution gives the following results

$$\rho = 1/V = 1/r^3[c_1 - \varkappa c^2 F(z)],$$
$$z = \frac{e^{-\lambda}}{2}, \quad F(z) = \int \frac{e^{-z}\,dz}{(1-2z)}.$$

This paper was presented by academician L. I. Sedov on 9 April 1965. Orig. art. has: 18 equations.

SUB CODE: 20, 03/ SUBM DATE: 04Apr65/ ORIG REF: 006

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

STANYUKOVICH, K.P.; SHARSHEKEYEV, O.; GUROVICH, V.TS.

Self-similar motions of a relativistic gas in the general theory of relativity in the case of point symmetry. Dokl. AN SSSR 165 no.3:510-513 N '65. (MIRA 18:11)

1. Submitted April 9, 1965.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

ADROV, M. I., SHARSHIN, N. N., KLIMOV, V. D.

Lumber Trade

"Syurekskiy" Lumber Enterprise practices. Mekh.trud.rab., 6, No.3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June 1952, Uncl.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

L 65161-65 EWT(d)/EWT(m)/EWP(w)/EWA(d)/EWP(t)/EWP(b)/ETC(m) JD/WW/EM

ACCESSION NR: AR5019384 UR/0124/65/000/007/V081/V081

SOURCE: Ref. zh. Mekhanika, Abs. 7V657

AUTHOR: Bondarenko, V. M.; Shashin, V.V.

TITLE: Effect of previous strain history on natural vibrations of bodies capable of creep

CITED SOURCE: Sb. Zhelezobeton. konstruktsii. Vyp. 1(30). Khar'kov, Khar'kovsk. un-t, 1964, 3-7

TOPIC TAGS: creep, structure vibration, vibration analysis, vibration stress, vibration theory, strain

TRANSLATION: It is noted that the stressed state of a body and the mechanical properties of many materials depend to a substantial degree on the previous history of strain. The property of creep, typical for the majority of materials, produces relaxation phenomena affecting the stressed state of a body. Characteristics of natural vibrations of bodies (i.e., amplitude, frequency, phase shift, logarithmic decrement of attenuation, zero position) are predetermined by the stressed state of such bodies, by the support specifications, and by mechanical strain factors. The report illustrates results of experimental studies carried out to evaluate qualitatively the effect of prior strain history

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ACCESSION NR: AR5019384

on natural vibrations of bodies characterized by creep. Tests involved cantilever samples of ebonite (length = 250 mm, cross section 5 x 40 mm). Wire strain gages [illegible] were used to measure natural vibration strains, while static deformation [illegible] prior strain history [illegible] by spring-type dial indicators. The [illegible] jected to two different types of prior strain history: 1) [illegible] constant stress; 2) [illegible] conditions. The amplitude [illegible] of 21 hrs was 60%. It is concluded that [illegible] significant degree on the prior history of strain. I. I. Ulitskiy

SUB CODE: AS, MT ENCL: 00

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548620020-3

FEDOROV, N.N.; SHARSHUKOVA, N.P.

Study of the pulsation regularities of velocities in a stream in the presence of an ice cover; according to observation materials of the State Hydrologic Institute on the Svir' River. Trudy GGI no.117:104-118 '64 (MIRA 18:1)

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